Amendments to the Claims

The following Listing of Claims replaces all previous versions of the claims in this application.

Listing of Claims

- 1. (Previously presented) An associative amphoteric polymer having a weight average molecular weight (M_w) greater than 50,000 g/mol consisting essentially of:
- (a) between 0.005 and 10 mole % of at least one acrylamide-derived cationic monomer containing a hydrophobic chain and with the general formula:

where

- R1, R2, R3, R4, R5, R6, independently, a hydrogen or an alkyl chain containing 1 to 4 carbons:
- O: an alkyl chain containing 1 to 8 carbons;
- R7: an alkyl or arylalkyl chain containing 8 to 30 carbons;
- X: a counterion with a negative charge;
- (b) between 1 and 30 mole % of at least one anionic monomer containing acrylic, vinyl, maleic, fumaric or allyl functionalities and containing a group selected from carboxy, phosphonate or sulfonate and/or their ammonium salts or alkaline-earth metal salts or alkali metal salts; and
- (c) between 1 and 99 mole % of at least one acrylamide-derived non-ionic hydrosoluble monomer;

wherein said amphoteric polymer is characterized by a monomeric molar ratio of x/y, in which x corresponds to the mole percentage of said cationic monomer containing a hydrophobic chain, y corresponds to the mole percentage of said anionic monomer, and y > x.

- 2. (Previously presented) An associative amphoteric polymer as claimed in claim 1 wherein the anionic monomer is selected from the group consisting of acrylic acid, methacrylic acid, itaconic acid, crotonic acid, maleic acid, fumaric acid, 2-acrylamido-2-methylpropane sulfonic acid, vinylsulfonic acid, vinylphosphonic acid, allylsulfonic acid, allylphosphonic acid and/or their alkali metal, alkaline-earth metal or ammonium water-soluble salts.
- 3. (Previously presented) An associative amphoteric polymer as claimed in claim 1 wherein the acrylamide-derived non-ionic hydrosoluble monomer comprises a water-soluble vinyl monomer selected from the group consisting of acrylamide and methacrylamide, N-isopropylacrylamide, N-N-dimethylacrylamide, and N-methylolacrylamide.
- 4. (Previously presented) An associative amphoteric polymer as claimed in claim 1 wherein said polymer is branched and/or cross-linked and additionally comprises a branching and/or cross-linking agent.
- 5. (Previously presented) An associative amphoteric polymer as claimed in claim 4 wherein the branching and/or cross-linking agent is selected from the group consisting of N-methylol acrylamide, methylene bis acrylamide, allyl ethers of sucrose, diacrylates, divinyls, diallylated compounds, methyl triallyl ammonium chloride, triallylamine, tetraallyl ammonium chloride, tetra allyl oxyethane and tetra allyl ethylene diamine.
- (Previously presented) An associative amphoteric polymer as claimed in claim 1 in dry, powder or granulate form.

- (Currently amended) An associative amphoteric polymer as claimed in claim 1 comprising:
 (a) between 0.005 and 10 mole % of a hydrophobic cationic monomer,
- (b) between 5 and 90 30 mole % of an acidic component comprising one or more of: acrylic acid, methacrylic acid and 2-acrylamido-2-methylpropane sulfonic acid or their salts, and
- (c) between 5 and 90 mole % of at least one acrylamide-derived non-ionic hydrosoluble monomer amide chosen from the group consisting of acrylamide, methacrylamide, N-isopropylacrylamide, and N-N-dimethylacrylamide.
- 8. (Previously presented) An associative amphotoric polymer as claimed in claim 1 wherein the acrylamide-derived hydrophobic cationic monomer is selected from the group consisting of N-acrylamidopropyl-N, N-dimethyl-N-dodecyl ammonium chloride, N-methacrylamidopropyl-N, N-dimethyl-N-dodecyl ammonium bromide, N-methacrylamidopropyl-N, N-dimethyl-N-dodecyl ammonium bromide, N-methacrylamidopropyl-N, N-dimethyl-N-dodecyl ammonium bromide, N-acrylamidopropyl-N, N-dimethyl-N-octadecyl ammonium chloride, N-acrylamidopropyl-N, N-dimethyl-N-octadecyl ammonium bromide and N-methacrylamidopropyl-N, N-dimethyl-N-octadecyl ammonium bromide and N-methacrylamidopropyl-N, N-dimethyl-N-octadecyl ammonium bromide
- 9. (Previously Presented) An associative amphoteric polymer as claimed in claim 1 further comprising at least one other monomer, whether ionic or not, hydrosoluble or not, accounting for less than 20 mole % and selected from the group consisting of monomers of dialkylaminoalkyl (meth)acrylate, dialkylaminoalkyl (meth)acrylate, dialkylaminoalkyl (meth)acrylate, dialkylaminoalkyl acrylamide, dialkylamine, methyldiallylamine and their quaternary ammonium salts or acid salts, acrylamide derivatives, derivatives of acrylic acid, hydroxyalkyl acrylates and methacrylates, allyl derivatives, styrene acrylate esters containing ethoxylated chains and acrylate esters not terminating with an alkyl or arylalkyl chain.

10. (Previously presented) An associative amphoteric polymer as claimed in claim 1 having a weight average molecular weight (M_w) greater than 100,000 g/mol.

11. (Previously presented) An aqueous composition containing as a thickening agent at least one polymer as claimed in claim 1.

12. (Canceled)

- 13. (Original) The associative amphoteric polymer of claim 1, wherein R7 is an alkyl or arylalkyl chain containing 8 to 20 carbons.
- 14. (Original) The associative amphoteric polymer of claim 1 wherein X is a halide selected from the group consisting of bromide, chloride, iodide and fluoride.
- (Currently amended) The associative amphoteric polymer of claim 7, comprising:
 - (a) between 0.01 and 5 mole % of the hydrophobic cationic monomer.
- (b) between 10 and 60 30 mole % of an acidic component comprising one or more of: acrylic acid, methacrylic acid and 2-acrylamido-2-methylpropane sulfonic acid or their salts, and
- (c) between 35 and 90 mole % of at least one acrylamide-derived non-ionic hydrosoluble monomer chosen from the group consisting of acrylamide, methacrylamide, N-isopropylacrylamide, and N-N-dimethylacrylamide.
- 16. (Currently amended) The associative amphoteric polymer of claim 15, comprising:
 - (a) between 0.02 and 2 mole % of the hydrophobic cationic monomer,
 - (b) between 10 and 50 30 mole % of said acidic component and
- (c) between 48 and 90 mole % of said acrylamide-derived non-ionic hydrosoluble monomer

17. (Previously presented) The associative amphoteric polymer of claim 10 having a weight average molecular weight (M_w) greater than 200,000 g/mol.

18. (Previously presented) The associative amphoteric polymer of claim 1 wherein said anionic monomer contains a carboxylic acid group or a salt thereof.

19. (Previously presented) The associative amphoteric polymer of claim 18 wherein said anionic monomer is acrylic acid or a salt thereof.

20. (Previously presented) The associative amphoteric polymer of claim 13 wherein R7 is an alkyl chain containing 12 to 18 carbon atoms.

21. (New) The associative amphoteric polymer of claim 18 comprising between 1 and 30 mole% of said anionic monomer containing a carboxylic acid group or a salt thereof.